

REMARKS

Claims 1 – 7, 9 – 17 and 37 - 53 are pending in the present Application. Claims 1, 42, and 53 have been amended; no claims have been added or cancelled, leaving Claims 1 – 7, 9 – 17 and 37 - 53 for consideration upon entry of the present Amendment. No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Amendments

Claims 1, 42, and 53 have been amended to include filtering the solution to be dispensed. Support for this amendment can at least be found in paragraph [0025] and [0055-0057] of the Specification as originally filed. It is noted in paragraph [0025] that the filtration can be performed prior to dispensing the solution and/or can be a point filtration at the dispense step.

Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 1-17, 37-41, and 49-53 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the phrase “is unreactive” is considered indefinite by the Examiner. The term has been deleted from claim 1 and, therefore, the rejection is now moot.

Claim Rejections Under 35 U.S.C. § 102(b)

Claims 1, 4-5, 7, 9 – 11, 14 – 17, 38, and 51 – 53 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Patent No. 5,916,632 to Mishina, et al (hereinafter “Mishina”). Applicants respectfully traverse this rejection.

Mishina generally teaches a polyimide varnish that is a solution having a polyimide and/or a polyimide precursor dissolved in an organic solvent.

To anticipate a claim, a reference must disclose each and every element of the claim. *Lewmar Marine v. Varient Inc.*, 3 U.S.P.Q.2d 1766 (Fed. Cir. 1987).

Independent claim 1, as amended, is directed to a spin coating process generally comprising filtering a solution of a solution solvent and thermoplastic polymer, dispensing the filtered solution

onto a substrate, spinning the substrate, and removing the solution solvent to produce a coated substrate comprising a coating having less than or equal to 10 asperities over the entire surface of the coated substrate.

Independent claim 53 as amended is directed to a spin coating process generally comprising filtering a solution of a solution solvent and thermoplastic polymer, dispensing the filtered solution onto a substrate, spinning the substrate, and removing the solution solvent to produce a coated substrate comprising a coating having less than or equal to 10 asperities over the entire surface of the coated substrate.

Mishina fails to anticipate independent claims 1 and 53 as this reference does not teach each and every element of the instant claims. In particular, this reference fails to teach filtering a solution of solvent and thermoplastic polymer prior to/or at the point of dispensing to produce a coated substrate comprising a coating having less than or equal to 10 asperities over the entire surface of the coated substrate.

As taught by the Specification, spin coated data storage media have stringent surface quality requirements such as having low asperities (paragraph [0019]), which are undesired surface features that project above the top surface of the media. Filtration is one approach to reduce the number of asperities on the spin coated substrate. Both independent claims 1 and 53 require filtration of the solution as well as requiring the coated substrate to have a coating having less than or equal to 10 asperities over the entire surface of the coated substrate. Mishina fails to teach either one of these elements.

The Examiner alleged that the process steps and materials of Mishina in Column 6, lines 1-12 are materially similar to the claimed process and thus the results obtained by applicants process must necessarily be the same as those obtained by Mishina (Office Action dated 6/12/2006, page 5). However, Mishina fails to teach filtering the solution of a solution solvent and thermoplastic polymer as is required by the independent claims as currently amended. Accordingly, the resulting coated substrate would not be the same as Mishina. Indeed, Mishina produced coatings having both fine irregularities and cissing. Accordingly, as Mishina fails to teach each and every limitation of independent claims 1 and 53, reconsideration and removal of the rejections are respectfully requested.

Claims 1, 4-5, 7, 9 – 11, 14 – 17, 38, and 51 - 53 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Patent No. 5,177,181 to Rosenfeld, et al. (hereinafter “Rosenfeld”). Applicants respectfully traverse this rejection.

Rosenfeld generally discloses an aromatic diamine and methods of making photosensitive polyamic acids and polyimides from the aromatic diamines, which can be crosslinked with light (abstract). In particular, this reference discloses that certain solvents including NMP and dimethyl formamide can be used to prepare polyamic acids and a polyimide coating can be made from a solution of the polyamic acids (Column 6, lines 20-38; Column 11, line 35 to Column 12, line 68). However, Rosenfeld fails to teach each and every element of the instant Claims 1 and 53 as amended; in particular, this reference fails to teach filtering a solution of solvent and thermoplastic polymer prior to/or at the point of dispensing to produce a coated substrate comprising a coating having less than or equal to 10 asperities over the entire surface of the coated substrate.

As Rosenfeld does not teach a spin coating process wherein a solution of solvent and thermoplastic polymer is filtered prior to/or at the point of dispensing, this reference does not anticipate claims 1 or 53, or the claims 4-5, 7, 9 – 11, 14 – 17, 38 and 51 – 52, which ultimately depend from claim 1. Therefore, reconsideration and withdrawal of the 102(b) rejections are respectfully requested.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 2 – 3, 6, 12 – 13, 42 – 44 and 47 – 48 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Rosenfeld. Applicants respectfully traverse this rejection.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Dependent claims 2 – 6, 12 – 13, 37, 42 – 44 and 47 – 48 are not obvious over Rosenfeld since this reference does not teach all elements of the claims. Rosenfeld fails to teach or suggest filtering a solution of solvent and thermoplastic polymer prior to/or at the point of dispensing to produce a coated substrate comprising a coating having less than or equal to 10 asperities over the entire surface of the coated substrate, which is required by independent claim 1. Thus, dependent claims 2 – 6, 12 – 13, 37, 42 – 44 and 47 – 48, which all depend from independent claim 1, have not been rendered obvious over Rosenfeld.

Furthermore, based on the teaching of Rosenfeld, a skilled artisan would not be motivated to filter the coating solution of Rosenfeld as the reference does not indicate why it would be desirable to include the added processing condition. There is no particular need disclosed in Rosenfeld that would have motivated one to modify the reference to perform an additional processing step. Therefore, reconsideration and withdrawal of the 103(a) rejection are respectfully requested.

Claims 45-46 and 49 – 50 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 6,197,399 to Naito et al. (hereinafter “Naito”) in view of Rosenfeld. Applicants respectfully traverse this rejection.

Naito generally discloses a recording medium having a hydrophilic film formed on a substrate, recording domains formed directly on the hydrophilic film so as to form a predetermined pattern, each recording domain being made of an organic dye molecule, and an isolation region surrounding the recording domains, the isolation region being made of an organic molecular film. (Abstract)

Claims 45-46 ultimately depend from claim 42 and claims 49-50 ultimately depend from claim 1. Both independent claims 1 and 42 require the step of filtering a solution of solvent and thermoplastic polymer prior to/or at the point of dispensing to produce a coated substrate. Neither Naito nor Rosenfeld teach or suggest a filtration step for the solution of solvent and polymer. Additionally, without a suggestion, one of ordinary skill in the art would not be motivated to add another step into a process.

Additionally, the references also do not teach or suggest producing a coated substrate comprising a coating having less than or equal to 10 asperities over the entire surface of the coated substrate, as is required by claim 1. As each and every limitation of the claims are not taught or

suggested by the references, the Applicants respectfully request withdrawal of the 35 U.S.C. 103(a) rejections.

Claim 39 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Rosenfeld in view of Naito, and further in view of U.S. Patent No. 5,055,631 to Sartori, et al. (hereinafter “Sartori”). Applicants respectfully traverse this rejection.

Sartori generally discloses a method for separating mixtures of aromatics and non-aromatics by permeation through a sulfonated polysulfone membrane, which is selective for aromatics. However, this reference does not cure the deficiency of Rosenfeld and Naito as Sartori also fails to teach or suggest the requirement of filtering the solution. Thus, claim 39, which ultimately depends from independent claim 1, has not been rendered obvious over Rosenfeld in view of Naito and further in view of Sartori. Applicants, therefore, respectfully request withdrawal of this 35 U.S.C. 103(a) rejection.

Claim 40 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Rosenfeld in view of Naito and further in view of Japanese Patent No. 02-288021, Abstract, (Derwent Account No. 1991-017337) to Kageyama, et al. (hereinafter “Kageyama”). Applicants respectfully traverse this rejection.

Kageyama generally discloses a heat resistant self-fusible enamel wire.

Claim 40 is not obvious over Rosenfeld in view of Naito and further in view of Kageyama as these references do not teach all elements of the instant claims. Particularly, none teach or suggest the required filtration of the solution. Thus, Rosenfeld, Naito, and Kageyama, either alone or combined, fail to teach or suggest each and every element of claim 1. Accordingly, claim 40, which ultimately depends from independent claim 1, is also not rendered obvious over these references.

Applicants respectfully request withdrawal of this 35 U.S.C. 103(a) rejection.

Claim 41 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Rosenfeld in view of Naito and further in view of U.S. Patent No. 5,589,523 to Sawaoka, et al. (hereinafter “Sawaoka”) and U.S. Patent No. 4,842,740 to Chung, et al. (hereinafter “Chung”). Applicants respectfully traverse this rejection.

Sawaoka generally discloses a microcapsule curing agent including (A) a curing agent for a thermosetting resin and (B) a thermoplastic resin (abstract).

Chung generally discloses membranes comprised of a blend of polyarylate and polybenzimidazole polymers (abstract).

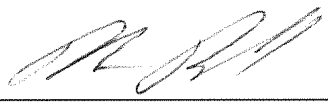
As mentioned previously, Rosenfeld and Naito fail to teach or suggest filtering the spin coating solution and they further fail to teach or suggest producing a coated substrate comprising a coating having less than or equal to 10 asperities over the entire surface of the coated substrate. Sawaoka also fails to teach or suggest these required limitations of claim 1. Chung does teach filtering the polybenzimidazole and polyarylate mixtures to remove residual solids. However, Chung does not teach or suggest that these polymer solutions can be spin coated to form coatings. Furthermore, Chung fails to teach or suggest filtering a solution of solvent and thermoplastic polymer prior to/or at the point of dispensing in a spin coating process to produce a spin coated substrate comprising a coating having less than or equal to 10 asperities over the entire surface of the coated substrate. As each and every limitation of claim 1 is not taught or suggested by the references, the Applicants respectfully request withdrawal of this 35 U.S.C. 103(a) rejection.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and withdrawal of the objection(s) and rejection(s) and allowance of the case are respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-1131.

Respectfully submitted,

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